



Video-Editing Software

There are plenty of low-cost video editors around if you just want to tweak your home movies, but for more professional-looking output you'll need one of the six more capable packages on test here

If you want to liven up your home movies with some fun effects and attractive DVD menus, there are plenty of low-cost editors that are capable of great results (see *Shopper*, May 2005 for a Labs review of budget packages). If, on the other hand, you're producing for a more demanding audience – creating promotional or training videos, perhaps, or producing as an artistic endeavour – more capable editing software is a shrewd investment. Not only will the results be better, but you'll be able to work faster, too. Expertise at using a high-end editing program may even set you up for a new career in video production.



CHOOSING... VIDEO-EDITING SOFTWARE

The most obvious difference between video-editing packages designed for home users and those designed for professionals is the sophistication of their editing functions. The products on test here allow video to be manipulated in impressive ways, whether it's sending multiple video streams spinning around in a virtual three-dimensional space or creating opening titles that seem to float on the wind.

However, raw power isn't everything. More important are the precision with which the editing tools can be controlled, the speed at which projects can be taken from capture to render and the quality of the real-time previews that can make precise, quick editing easy or almost impossible.

SHARPEST TOOLS IN THE BOX

All the editors on test offer frame-accurate timeline editing, but not all provide the same degree of control over effects and object motion. In the reviews on the next three pages we often refer to keyframes. These allow an effect's parameters to vary over time. Parameters are defined for specific 'key' frames, leaving the software to fill in the gaps by smoothly adjusting the parameters from one keyframe to the next.

Keyframe editing is available to some extent in all the packages, but some implementations are better than others. Some offer separate keyframe tracks for each parameter rather than each effect. This can seem unnecessarily complex when attempting simple edits, but for complex object motion paths, for example, the ability to define separate keyframes for size, position and angle often makes the process easier and can lead to more fluid movement. Options such as Linear, Smooth and Hold affect the speed at which the software moves between keyframes and the curvature of the path it takes, often giving more natural-looking results. The greatest level of control is afforded by bezier curve editing, where handles attached to each keyframe define the angle and curvature of paths between keyframes with the utmost accuracy.

SMOOTH OPERATION

Being able to execute complex edits is valuable, but even ambitious projects mostly consist of simple jobs: trimming clips, arranging them on the timeline, fine-tuning their length and position and adding simple transitions. Fast, accessible core editing tools therefore can make a huge difference, as less time spent grappling with the software's controls means more time concentrating on the creative process.

Most important of all is the ability to see the results. All today's video editors can display real-time previews, complete with effects, transitions and overlays, but preview quality varies greatly. Some editors can play 10 simultaneous DV streams with effects, while others manage just three streams without effects before running into problems. We tested using a dual-core Athlon 64 4600+ with 2GB of RAM and a GeForce 7800GTX graphics card. When the going gets tough, some allow the preview resolution to be reduced to improve performance, some start to drop frames and some grind to a halt altogether.

The best place to view previews is on a TV screen because, after all, this is where you edited

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video will probably end up. All the packages on test can pipe real-time previews to a DV camera via FireWire, which can in turn be wired up to a TV for full-screen monitoring. However, your DV camera will need to support DV in to use this feature, and some of the editors have reduced preview capabilities in this mode.

EXTRAS

When you're spending hundreds of pounds on software, you'll want to make sure the key features you need are supported. DVD authoring is an integral part of most video-production workflows, but while some packages offer advanced control over every aspect of the authoring process, others omit DVD authoring altogether.

Another key area is format support. All the packages on test this month can edit DV and MPEG2 and output in a variety of formats including Windows Media and QuickTime. All but one can edit high-definition (HD) video, too, capturing from HDV cameras and exporting back to tape or as WMV HD files. (For more information on working with HD, see our feature 'Working With High-Definition Video' on page 220). It may not be a priority just yet, but it looks inevitable that video production at all levels will move over to HD in the next few years. As such, we'd recommend taking it seriously now. Considering that you're investing hundreds of pounds in your chosen software and hundreds of hours learning how to get the most out of it, you'll want one that's going to last well into the HD revolution.



REVIEW VIDEO-EDITING SOFTWARE

ADOBE
Premiere Pro 1.5

RATING ★★★★★

PRICE £536 inc VAT

SUPPLIER www.dabs.comDETAILS www.adobe.co.uk

Premiere is the granddaddy of PC video editing, first appearing in 1991. Even this latest version is almost two years old, but it doesn't feel at all dated, and 15 years of development have resulted in an extremely elegant, powerful editor. HDV has been added via a free update, bringing the version number to 1.5.1.

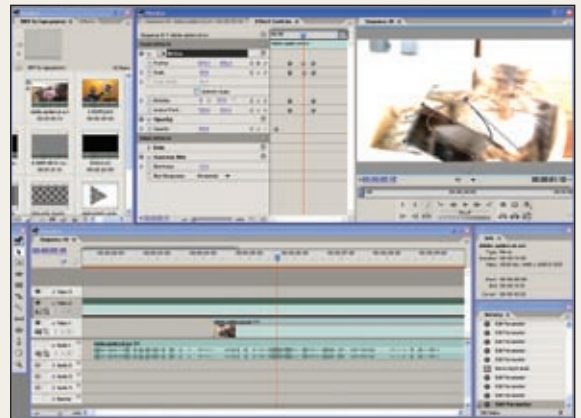
HDV footage is converted to Cineform format on capture for easier manipulation on the timeline. It's also possible to render projects in HDV's native MPEG2 TS format and send them back to tape, but MPEG2 TS files can't be imported from hard disk; you'd need to record them to tape then re-import them. There's no MPEG4 support, but Premiere Pro was the only editor to be able to import a WMV HD file complete with its 5.1 surround soundtrack intact. DVD Video disc burning is built in, but its complete lack of authoring tools makes it useful only for running off quick copies.

Monitoring options include FireWire output for DV projects and full-screen previews on a second computer monitor for HDV, although the

latter is limited to SD resolution regardless of the monitor resolution. Real-time preview performance is poor, though. We managed only three DV streams or a single Cineform HD stream on our dual-core Athlon 64 4600+ PC before frames were dropped, so even simple dissolves between two HD streams resulted in shuddery playback.

Premiere Pro's timeline-editing tools are elegant and comprehensive, but the software's greatest strengths are the quality of its effects and the precision of their keyframe-based parameter control. Comprehensive colour-correction filters are augmented by specialist tools such as Shadow/Highlight, which recovers lost detail in high-contrast footage. Superior creative effects such as Lens Distortion and Echo offer interesting ways to liven up footage without being too overbearing and tacky. Effect control is presented in lists of parameters with a keyframe track for each one. This can be quite intimidating for less technical users, but delivers a huge amount of precision. Avid Liquid's keyframable bezier curves are even more powerful, though; Premiere offers bezier curves only for 2D motion control.

The main problem with Premiere Pro is its price. It's a lot to pay for a video editor, and especially one with no DVD-authoring facilities. When we reviewed it in 2004 this wasn't such an



Premiere's object motion includes multiple keyframe tracks and bezier curves for precise, smooth movement

issue, as it could be bought as part of Matrox's RT.X10 Suite, which cost around £500. Sadly, this bundle is no longer available. Matrox's RT.X100 Xtreme Pro is the closest equivalent at £749 including VAT, but although it's a decent product, the card's lack of support for HD is off-putting.

✓ Superior effects library and object motion controls

✗ Expensive; poor real-time preview performance

REQUIREMENTS Windows XP SP2, 3GHz Pentium 4 processor, 1GB 333MHz RAM, 128MB PCI-E or AGP 8x graphics card

REVIEW VIDEO-EDITING SOFTWARE

AVID
Liquid 7

RATING ★★★★★

PRICE £350 inc VAT

SUPPLIER www.sub.co.ukDETAILS www.avid.co.uk/liquid

Pinnacle Liquid received glowing reviews in previous issues of *Shopper*, so it's good to see that Pinnacle's recent acquisition by Avid hasn't derailed the software's development. New features in version 7 include improved format support; we failed to find a video file the software couldn't import. Various tweaks to the interface, a new Image Stabilisation effect and SmartSound music library should make those upgrading from Pinnacle Studio feel more at home.

Liquid's core editing tools are reasonably elegant, but one area of concern is its handling of different resolutions on the timeline. Importing an HD clip into an SD project results in just the central part being visible, which we can't imagine ever being useful. A Scale to fit option is available to stop the same thing happening to high-resolution photos, but photos are then resampled at the project's native resolution, so zooming into the picture reveals a lack of detail. A TitleDeko plug-in handles text, but it too simply generates native-resolution bitmaps, so text doesn't scale as well as the vector-based text used elsewhere.

Liquid employs the graphics card's processor for 3D motion, transitions, complex distortion and even basic colour correction effects. As a result, it can display smooth previews of seriously complex projects. We managed 12 simultaneous DV streams with 3D motion on our test PC. However, rendering is much slower than with the other editors. One minute of DV with object motion, an invert effect and text overlay took over five minutes, whereas nearly all the other editors managed it in less than a minute. Previews on an external monitor via FireWire aren't practical because as soon as you depart from playing a single DV stream without effects, the output becomes blank.

Keyframe editing is extremely powerful, with bezier curves for each parameter of an effect. These are presented in a dedicated window, which isn't as intuitive as Premiere's bezier curves drawn directly on the monitor window, but Liquid's method makes complex paths more manageable.

Other valuable features include the ability to synchronise up to 16 video streams from a multi-camera shoot and create a split-screen preview. This makes an otherwise laborious job wonderfully easy. DVD authoring is built directly into the timeline, and although its features and ease of use are no match for DVD Architect, included with Sony Vegas, there's still plenty of control on offer.



Liquid makes it easy to synchronise and edit footage shot simultaneously with multiple cameras

Superb preview performance, bezier keyframes and multi-camera editing are all compelling reasons to choose Liquid over Sony Vegas, but the latter's superior DVD authoring, more streamlined interface and superb attention to detail earn it our vote.

✓ Excellent real-time previews and keyframe-based editing; wide format support

✗ Slow rendering; poor handling of different resolutions on a single timeline

REQUIREMENTS Windows XP SP2, 3GHz Pentium 4 processor, 1GB 333MHz RAM, 128MB PCI-E or AGP 8x graphics card



REVIEW VIDEO-EDITING SOFTWARE

AVID
Xpress DV 4.6

RATING ★★☆☆

PRICE £335 inc VAT

SUPPLIER www.sub.co.ukDETAILS www.avid.co.uk

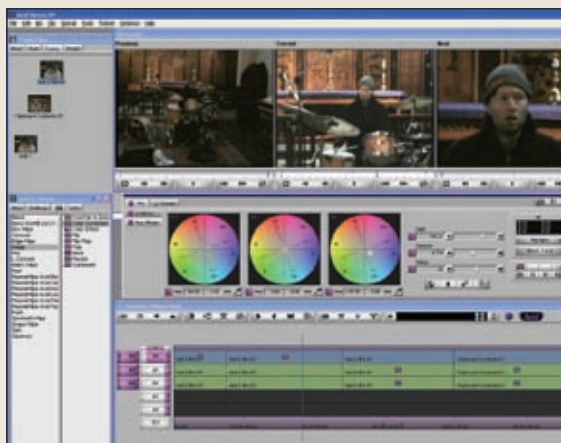
In some respects, Avid Xpress DV is underpowered compared to the other editors on test. It doesn't support HD or surround sound and has a pedestrian effects library with no 3D motion. However, it does provide an entry point into the prestigious Avid product family at a previously unheard of price. Both Windows XP and Mac OS X versions are included, and so too are the capable DVD authoring package Sonic DVDIt! 5 SE and the media encoder Sorenson Squeeze 4.

Previews via FireWire are possible, but any overlays, transitions and effects are disabled. This means monitoring on the computer display is the only viable option, but initially this didn't work at all on our test system. Avid quickly diagnosed the problem and sent us an alternative driver for our nVidia graphics card, although it was older than the one already installed. Avid's support also warned about problems running Xpress DV with Windows Media Player 10 or Nero, and although we didn't encounter any more problems, it seems fair to say that Xpress DV needs a dedicated Windows installation for trouble-free use.

While most editors' central focus is the timeline, Xpress DV takes a holistic approach to the video production workflow, with advanced tools for the organisation of media before editing and file consolidation for efficient archiving. The timeline doesn't lend itself to drag-and-drop techniques prevalent in other editors; this is much more a keyboard-driven interface. With the basics grasped, the timeline controls are precise and lend themselves well to typical editing tasks, although some functions, such as nesting of effects, seem needlessly convoluted. Most frustrating is that simply zooming or scrolling the timeline halts playback. Preview performance is fantastic, though, with our dual-core Athlon 64 4600+ providing smooth playback of 12 video tracks with effects.

The few effects are mostly plain but functional, although colour correction is the best of any editor here. Colour wheels and colour curves give extremely precise control, while Automatic options provide quick fixes to common problems. A NaturalMatch function uses a colour picker to match tones from different clips for continuity, and the clips before and after the one being edited are displayed to help find the best settings.

Avid Xpress isn't easy for new users to get to grips with, as it demands that they conform to a specific, highly structured way of working. However,



Avid Xpress's colour correction tools are a step up from the competition's

one benefit is that the skills learnt will transfer well when working with professional Avid systems. The lack of HD support is a concern, though. If your next video camera is an HDV model (and if you're serious about video it probably will be), you'll have to upgrade to the £1,250 Xpress Pro.



Superb preview performance; powerful colour correction



No HD support; basic effects; fussy installation requirements

REQUIREMENTS Windows XP SP2, 3GHz Pentium 4 processor, 1GB 333MHz RAM, 128MB PCI-E or AGP 8x graphics card

REVIEW VIDEO-EDITING SOFTWARE

CANOPUS
Edius Pro 3

RATING ★★☆☆

PRICE £430 inc VAT

SUPPLIER www.dv247.comDETAILS www.canopus.com

Edius Pro manages to exude an air of professionalism and sophistication while still being fairly easy to use. The various windows arranged themselves neatly on our dual-monitor setup, but although the screen layout is freely customisable, attempting to use the software on a single 1,280x1,024 display felt pretty cramped.

DV capture, monitoring and print to tape via FireWire was straightforward, as was HDV capture, using a proprietary intermediary codec called Canopus HQ. Fortunately, its .avi file extension means other software installed on the same PC can access the files too. Export was less satisfying, though. A separate program, Canopus ProCoder Express, handles transcoding to a wide range of formats, but while the ability to set up hot folders for automatic conversion to multiple formats is useful for professionals, less demanding users will be frustrated. The Wizard mode is overly simplistic, while the Advanced options are poorly presented and require in-depth knowledge.

Edius Pro's greatest strength is its real-time preview performance. We were able to view four

HD streams in Canopus HQ format with advanced colour correction on each without a single dropped frame on our dual-core Athlon 64 4600+ system. With DV footage we achieved 10 simultaneous streams with effects. However, attempting any more than this caused playback to slow down rather than for frames to be dropped, giving unrealistic feedback of edits and causing the audio to stutter. The way around this is to use the Partial Render function, but this can be a bore if required too regularly.

New to version 3 are 16 blend modes for overlaying video streams. There's also an improved colour-correction effect, but most other new features are simply interface tweaks. Sadly, Edius Pro's main weakness remains: there's no keyframe-based automation in the vast majority of its effects, so effects settings are static for the duration of clips. It's sometimes possible to work around this with the Blend Filters effect, but the process is convoluted and works effectively only for colour-based effects. That said, there aren't a huge number of distortion effects available anyway. The Old Movie/Film is one of the best of its kind we've seen, but the other effects tend to be either pedestrian or tacky. 3D object motion is available and, thankfully, is keyframable, but for some reason it can't be applied to a clip at the same time as chroma keying or blend modes.



Edius Pro excels at real-time previews of complex projects, although passing its performance threshold creates serious problems

When the effects are keyframable and other changes are made, Edius Pro will be a force to be reckoned with. However, it would still lack the surround sound and DVD-authoring capabilities of Vegas +DVD and Liquid, both of which cost less.



Superb preview performance



Poor effects implementation; awkward export

REQUIREMENTS Windows XP SP2, 3GHz Pentium 4 processor, 512MB RAM (dual 2.8GHz Xeon, 1GB RAM, 128MB graphics recommended for HD), 800MHz disk space



REVIEW VIDEO-EDITING SOFTWARE

SONY Vegas +DVD 6

RATING ★★★★★

PRICE £399 inc VAT

SUPPLIER www.dv247.comDETAILS www.sonymediasoftware.com

Much of the appeal of Sony Vegas stems from its speed. While other software requires menu delving and dialog box tweaking in order to dissolve between two clips, adjust their transparency or play them in fast or slow motion, all these functions can be achieved directly on Vegas's timeline with the standard Edit tool. Quick screen redraws make the timeline extremely fast to navigate, too, although not when editing MPEG2 and other highly compressed video formats.

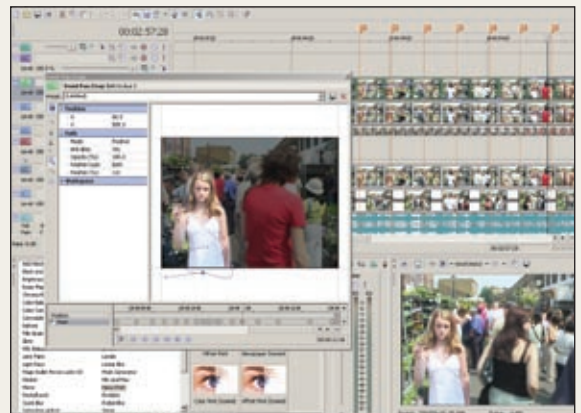
Vegas is also extremely quick for new users to learn. Guesswork nearly always achieves the required result, as the interface invariably behaves in a straightforward and consistent manner. There are also some excellent little touches that display a superb attention to detail that Vegas's competitors surprisingly miss. Importing widescreen footage into a 4:3 project maintains the correct aspect ratio, but a simple tick box is available to stretch it to fit. Object motion could be a little easier to manage, though, as 2D and 3D motion are accessed from different parts of the software and 3D motion is quite cumbersome.

Keyframes are used to automate effects, but Vegas's one keyframe track per effect makes complex edits harder to achieve than Liquid and Premiere's separate keyframes for each parameter of an effect. Similarly, Vegas's interpolation options to define paths between keyframes isn't as powerful as Liquid's bezier curve editing. However, Vegas's bezier masks and blend modes enable layers of video to be combined in ways that simply aren't possible with Liquid.

Real-time preview performance isn't great, but it's acceptable. We managed to play only three DV or two Cineform HD streams before the software started to drop frames, but preview quality settings are always close to hand, making it possible to drop the quality to improve performance as and when necessary.

One area in which Vegas +DVD is streets ahead of the competition is DVD authoring. This is handled by a separate application, DVD Architect 3, which is crammed with powerful features. If DVD authoring isn't a concern, Vegas 6 is available on its own for £299 including VAT.

Choosing between Vegas +DVD and Avid Liquid isn't easy. Liquid's real-time preview performance and superior keyframe editing give it the lead for complex tasks, although Vegas's blend modes and bezier masks close the gap to an extent. Meanwhile, Vegas's lightning-fast operation makes



Bezier masks allow characters and objects within video clips to be cut out manually, but it's painstaking work

it better at core editing tasks. Specific features such as Liquid's multi-camera editing or Vegas's DVD authoring will be of more value to some people, but even ambitious users will benefit more from Vegas's superior timeline editing than Liquid's advanced effects manipulation.

✓ Slick, accessible core editing tools; sophisticated DVD authoring

✗ Complex keyframe editing isn't as easy as with Avid Liquid

REQUIREMENTS Windows 2000/XP SP2, 800MHz processor, 256MB RAM (2.8GHz processor, 512MB for HD), 200MB disk space

REVIEW VIDEO-EDITING SOFTWARE

ULEAD MediaStudio Pro 8

RATING ★★☆☆☆

PRICE £200 inc VAT

SUPPLIER www.ulead.co.uk/storeDETAILS www.ulead.co.uk

Ulead is best known for its low-cost video- and image-editing software, but MediaStudio Pro is designed to compete with the likes of Premiere Pro, Vegas and Liquid. However, it still comes at an extremely attractive price. It's not outdone on features compared to the more expensive editors on test, with advanced colour correction, up to 99 video and audio tracks, 3D object motion and flexible DVD authoring. Version 8 introduces support for HDV as standard, nested timeline sequences and surround-sound mixing with 5.1 Dolby Digital encoding.

Another new feature is the Smart Compositor tool, which comprises various themed presets for creating opening sequences. The user simply slots in his or her own images, videos, music and text, and an animated sequence is made. The themes look smart and are good enough for corporate use, but although they can be customised once imported to the timeline, doing so is fiddly.

Preview performance was disappointing on our dual-core Athlon 64 4600+ PC as simply creating a dissolve between two HD clips caused

frames to be dropped. However, a Smart Proxy option converts HDV footage (captured as an MPEG2 program stream) to PAL DV for smoother real-time previews, but returns to the original HD files when you come to render. This allowed us to overlay three streams with smooth previews – some of the time, at least. Previews often still inexplicably reduced to a shudder. When working directly with DV footage, two streams were as much as the software could cope with reliably. The preview window can be resized and positioned freely – as can the other windows – but unless it's set to full or half the native resolution, interlaced footage looks bad. MediaStudio Pro is the only editor here that can preview HDV projects as a DV stream via FireWire to an external monitor, although doing so decreased preview performance further still.

A good range of corrective and creative effects is available. Auto Level is extremely useful for eliminating white balance problems at a single stroke. However, effects are awkward to manipulate. The software insists on the use of start and end keyframes even when they're not wanted. Worst of all, effect controls and the preview window can be sluggish to respond, which slows things down.

On first impressions MediaStudio Pro seems good value, but its clumsy interface makes it feel more like a souped-up entry-level editor rather than



MediaStudio Pro's 3D motion tool is comprehensive, but it's also tricky to manipulate

one for demanding enthusiasts. We also suffered a couple of crashes, which wasn't a problem with any of the other editors. If the alternatives seem too expensive, we recommend Sony's Vegas Movie Studio Platinum (see Hotlist, page 50). ☹

✓ Plenty of advanced features for the money

✗ Poor real-time preview performance; awkward effects manipulation

REQUIREMENTS Windows 2000/XP, 800MHz Pentium III processor, 256MB RAM (3GHz Pentium 4, 1GB RAM, PCI-E x16 graphics for HD), 800MB disk space